Fused chloride salt electrolysis cell

Description of Technology: An electrolytic cell is provided that increases current efficiency in the fused alkali chloride salt electrolysis process for producing chlorine and sodium or lithium by improved design of the cell's product collector, diaphragm and graphite anode.

Patent Listing:

1. **US Patent No. 5,904,821**, Issued May 18, 1999, "Fused chloride salt electrolysis cell"
   http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5904821

Market Potential: Electrolytic cells for the electrolysis of fused alkali chloride salts are used widely in industry to produce alkali metals such as sodium and lithium that are difficult to reduce from their compounds to a metallic state. A major cost for operating these cells is the cost of electric power. Since the early 1970s energy costs, including electric energy, have increased sharply. Development of more energy-efficient electrolysis processes, therefore, has become increasingly important during recent years.

The overall electric power requirements of the electrolytic processes are the total of the power requirements for the key operating elements in an electrolytic cell and the requirements for the ancillary operations.

The present invention provides an improved electrolytic cell for the production of chlorine and sodium or lithium from fused chloride electrolytes.

Benefits:

- More energy efficient than methods used in previous arts

Applications:

- Production of alkali metals

Contact: Ken Anderson
Director, Entrepreneurial & Small Business Support, Delaware Economic Development Office (DEDO)
Carvel State Building, 820 French Street, Wilmington, DE, 19801
Phone: (302) 577-8496, Fax: (302) 577-8499, Email: Kenneth.R.Anderson@state.de.us